

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of managing memory, comprising:
 - issuing a data request to remove data;
 - determining whether the data is being removed from a cache line in a cache memory;
 - determining whether the data being removed is stack data; and
 - varying the memory management policies depending on whether the data being removed corresponds to a predetermined word in the cache line.
2. (Original) The method of claim 1, wherein the predetermined word is the first word in the cache line.
3. (Original) The method of claim 2, wherein the cache line is invalidated.
4. (Original) The method of claim 2, wherein the cache line holding the stack data is queued for replacement by a replacement policy when a read hit occurs on the first word of the cache line.
5. (Original) The method of claim 4, wherein the replacement policy is a least recently used (LRU) policy.
6. (Original) The method of claim 1, wherein the predetermined word is the last word in the cache line.
7. (Original) The method of claim 1, wherein the cache line is a dirty cache line.

8. (Original) The method of claim 7, further comprising, invalidating the dirty cache line if the predetermined word in the dirty cache line is the first word.

9. (Original) A system, comprising:

a memory;

a controller coupled to the memory;

a stack that exists in the memory;

wherein the memory further comprises a cache memory and a main memory;
and

wherein the controller adjusts its management policies depending on whether data that is being removed corresponds to a predetermined word in a cache line.

10. (Original) The system of claim 9, wherein the predetermined word is the first word in the cache line.

11. (Original) The system of claim 10, wherein the cache line is invalidated.

12. (Original) The system of claim 11, wherein the invalidated cache line is queued for replacement by a replacement policy.

13. (Original) The system of claim 12, wherein the replacement policy is LRU.

14. (Original) The system of claim 9, wherein the predetermined word is the last word in the cache line.

15. (Original) The system of claim 9, wherein the cache line is a dirty cache line.

16. (Original) The system of claim 15, wherein the dirty cache line is invalidated if the predetermined word in the dirty cache line is the first word.

17. (New) A system, comprising:

- a processor that executes stack-based instructions;
- a cache controller coupled to the processor;
- a cache memory coupled to and controlled by said cache controller, said cache memory storing at least a portion of a stack, said stack having a top and a read access of the stack causes the top of the stack to be read;
- wherein the controller invalidates an entire line of said cache memory upon the processor reading a value from the top of the stack if said value from the top of the stack comprises a word at a predetermined location with said line.

18. (New) The system of claim 17 wherein said predetermined location is selected from a group consisting of the first word and the last word of the line.